5

ABSTRACT OF THE DISCLOSURE

A stimulable phosphor sheet is prepared by applying an electron beam to a stimulable phosphor or its source in a vacuum to vaporize a phosphor or its source and depositing the vaporized phosphor or source on the support, under the condition that the electron beam is applied to the stimulable phosphor or source at an accelerating voltage of 1.5 kV to 5.0 kV. The stimulable phosphor or its source is preferably in the form of a solid having a relative density of 80% to 98%.